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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,649	02/19/2004	Zheng Yang	CIS03-58(8290)	5508

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EXAMINER
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WILSON, ROBERT W

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/782,649

Applicant(s)

YANG ET AL.

Examiner

Robert W. Wilson

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,7,10-14,16,17,19 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 2, 8-9, 15, 18, 20-22, & 26-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 10, 12, 14-18, and 23-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Referring to claim 10, what is meant by “if the primary content engine sender is inactive, sending a multicast message to the plurality of content engine receives in response to the negative acknowledgement message”. The specification on Pg 15 lines 64-65 and Fig 5 do not teach this step. The specification and Fig 5 teach “end”. Where is it written in the specification “if the primary content engine sender is inactive, sending a multicast message to the plurality of content engine receives in response to the negative acknowledgement message”?

Referring to claim 12, what is meant by “means for if a negative acknowledgement message from at least one of the plurality of content engine receives is received before expiration of a predetermined period, then resending the multicast message a predetermined number of times”? Assuming Figure 4 is the best Figure and means for sending is 400 and means for waiting is 405 what is the “means for if a negative acknowledgement message from at least one of the plurality of content engine receives is received before expiration of a predetermined period, then resending the multicast message a predetermined number of times”?

Referring to claim 14, what is meant by “network interface” and “connection circuitry coupled to the network interface”? Fig 2 & Pg 12 Para 41 would be the place to look for the written description but these structures are not shown nor described.

Referring to claim 23, what is meant by “network interface” and “connection circuitry coupled to the network interface”? Fig 2 & 5 would be the place to look for the written description but these structures are not shown nor described

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Referring to claim 24, what is meant by “network interface” and “connection circuitry coupled to the network interface”? Fig 3 & 6 would be the place to look for the written description but these structures are not shown nor described

### *Drawings*

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claim limitations of: “if the primary content engine sender is inactive, sending a multicast message to the plurality of content engine receives in response to the negative acknowledgement message” in claim 10; “means for if a negative acknowledgement message from at least one of the plurality of content engine receives is received before expiration of a predetermined period, then resending the multicast message a predetermined number of times” in claim 12; and “network interface” and “connection circuitry coupled to the network interface” claims 14, 23, & 24 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 13 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Referring to claim 13, is directed to a program product or software. Software falls under the category of a judicial exception which not statutory. Software or a data structure is functional descriptive material. The examiner suggests that the applicant amend the claim to a Computer readable medium which is encoded with instructions which are executable by a processor wherein said instructions perform the following steps:

***Claim Objections***

5. Claims 1-11 & 19-22 are objected to because of the following informalities:

Referring to claims 1, 10, & 11, the examiner objects to wording of a computerized device performing the method because the associated limitations are steps which implies a method and not an apparatus. The examiner suggests rewording to have a method performed by the computerized device. Appropriate correction is required.

Referring to claims 19-22, the examiner objects to reference to the computerized device in the claim when they are referring back to a method and then the claims all refer to logic in method claims. The examiner recommends that the applicant amend the claim so they are not a combination of method apparatus and logic. Appropriate correction is required

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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7. Claims 1, 3, 4, 6, 12-14, 16-17, 19, & 25 are rejected under 35 U.S.C. 102(B) as being anticipated by Johnson (U.S. Patent No.: 6,247,059).

Referring to claim 1, Johnson teaches: In a computerized device a method for distributing content in a content distribution network (Sending node 12 perform the method) comprising the steps of :

Sending a multicast message to a plurality of content engine receivers, the multicast message including content to be distributed among the plurality of content engine receivers (Sender node 12 sends a multicast message to receiving nodes 12 (plurality of content engine receivers) the multicast message has inherent content per col. 6 lines 9 to 51 and per col. 5 line 63 to col. 6 line 7)

Waiting a predetermined period for a negative acknowledgment message from at least one of the plurality of content engine receivers (Sending node 12 has a timer which measure time from sending a multicast message until time duration of the roundtrip time to a receive a NAK per col.6 line 9 -51 and col. 6 line 52 to col. 7 line 22)

If a negative acknowledgement message from at least one of the plurality of content engine receivers is received before the expiration of a predetermined period then resending the multicast message a predetermined number of times ( sending node 12 receives a NAK within a predetermined period time (roundtrip interval) and resends the message that was multicast to the node which sent the NAK per col.6 line 9 -51 and col. 6 line 52 to col. 7 line 22)

In addition Johnson teaches:

Regarding claim 3, further comprising the step of receiving a negative acknowledgment message from one of the plurality of content engine receivers after the predetermined period has expired (Sending node 12 measures the period until timer times out and could receive a NAK after the time out)

And sending a unicast message of contents to be distributed to one of the one content engine receiver in response to the negative acknowledgement message received after the predetermined time (after the timeout the node 12 sender determines which receiving node 12s did not send either a ACK or NAK and sends a message to the specific receiving node 12 which sent the NAK which the examiner interprets as a unicast message)

Regarding claim 4, wherein the step of sending further comprises the step of sending the multicast message in response to a negative response to a negative acknowledgment message from at least one of the plurality of content engine receivers (The sending node 12 sends the message in response to the NAK received from the receiving node 12 which sends the NAK)

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Regarding claim 6, wherein the negative acknowledgment includes a request for at least one file not received in the multicast message and wherein the step of resending the multicast message further comprises resending only the at least one file requested in the negative acknowledgment ( NAK request has a Seq # or file number which has not been received and sending node 12 resends the appropriate Seq # or file)

Regarding claim 19, wherein the negative acknowledgment includes a request for at least one file not received in the multicast message and wherein when the logic causes the computerized device to perform the operation of resending the logic causes the computerized device to perform the operation of resending only the at least one file requested in the negative acknowledgment ( NAK request has a Seq # or file number which has not been received and sending node 12 resends the appropriate Seq # or file performed in logic in processor 16 per Fig 2)

Referring to claim 12, Johnson teaches: a content engine sender (Sending node 12) comprising:

Means for sending (processor 16 per Fig 2) a multicast message to a plurality of content engine receivers, the multicast message including content to be distributed among the plurality of content engine receivers (Sender node 12 sends a multicast message to receiving nodes 12 (plurality of content engine receivers) the multicast message has inherent content per co. 6 lines 9 to 51 and per col. 5 line 63 to col. 6 line 7)

Means for waiting (processor 16 per Fig 2) a predetermined period for a negative acknowledgment message from at least one of the plurality of content engine receivers (Sending node 12 has a timer which measure time from sending a multicast message until time duration of the roundtrip time to a receive a NAK per col.6 line 9 –51 and col. 6 line 52 to col. 7 line 22)

Means for (processor 16 ) if a negative acknowledgement message from at least one of the plurality of content engine receivers is received before the expiration of a predetermined period then resending the multicast message a predetermined number of times ( sending node 12 receives a NAK within a predetermined period time (roundtrip interval) and resends the message that was multicast to the node which sent the NAK per col.6 line 9 –51 and col. 6 line 52 to col. 7 line 22)

Referring to claim 13, Johnson teaches: a computer program producing having a computer readable medium including a computer program logic encoded thereto that when performed on a computer system directs the computer system to perform the method (Sending Node 12 per Fig 1 has Processor 16 which has a program stored in memory 20 per Fig 2 which perform the method)

Sending a multicast message to a plurality of content engine receivers, the multicast message including content to be distributed among the plurality of content engine receivers (Sender node 12 sends a multicast message to receiving nodes 12 (plurality of content engine receivers) the multicast message has inherent content per co. 6 lines 9 to 51 and per col. 5 line 63 to col. 6 line 7)

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Waiting a predetermined period for a negative acknowledgment message from at least one of the plurality of content engine receivers (Sending node 12 has a timer which measure time from sending a multicast message until time duration of the roundtrip time to a receive a NAK per col.6 line 9 –51 and col. 6 line 52 to col. 7 line 22)

If a negative acknowledgement message from at least one of the plurality of content engine receivers is received before the expiration of a predetermined period then resending the multicast message a predetermined number of times ( sending node 12 receives a NAK within a predetermined period time (roundtrip interval) and resends the message that was multicast to the node which sent the NAK per col.6 line 9 –51 and col. 6 line 52 to col. 7 line 22)

Referring to claim 14, Johnson teaches: a computerized device (Sending node 12) for distributing content in a content distribution network comprising:

A processor (16 per Fig 2)

A memory (20 per Fig 2)

A network interface (24 per Fig 2)

An connection circuitry (Bus per Fig 2) coupling the processor (16 per Fig 2) , the memory (20 per Fig 2) and the network interface (24 per Fig 2)

Wherein the memory (20 per Fig 2) is encoded with logic that when executed by the processor as a process causes the computerized device to perform the operations (program stored in memory)

Sending a multicast message to a plurality of content engine receivers, the multicast message including content to be distributed among the plurality of content engine receivers (Sender node 12 sends a multicast message to receiving nodes 12 (plurality of content engine receivers) the multicast message has inherent content per co. 6 lines 9 to 51 and per col. 5 line 63 to col. 6 line 7)

Waiting a predetermined period for a negative acknowledgment message from at least one of the plurality of content engine receivers (Sending node 12 has a timer which measure time from sending a multicast message until time duration of the roundtrip time to a receive a NAK per col.6 line 9 –51 and col. 6 line 52 to col. 7 line 22)

If a negative acknowledgement message from at least one of the plurality of content engine receivers is received before the expiration of a predetermined period then resending the multicast message a predetermined number of times ( sending node 12 receives a NAK within a predetermined period time (roundtrip interval) and resends the message that was multicast to the node which sent the NAK per col.6 line 9 –51 and col. 6 line 52 to col. 7 line 22)



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In addition Johnson teaches:

Regarding claim 16, wherein the logic further causes the computerized device to perform the operation of receiving a negative acknowledgment message from one of the plurality of content engine receivers after the predetermined period has expired (Sending node 12 measures the period until timer times out and could receive a NAK after the time out)

And sending a unicast message of contents to be distributed to one of the one content engine receiver in response to the negative acknowledgement message received after the predetermined time (after the timeout the node 12 sender determines which receiving node 12s did not send either a ACK or NAK and sends a message to the specific receiving node 12 which sent the NAK which the examiner interprets as a unicast message)

Regarding claim 17, wherein when the logic causes the computerized device to perform the operation of sending the logic causes the computerized device to perform the operation of sending the multicast message in response to a negative acknowledgment message form at least one of the plurality of content engine receivers. (The sending node 12 sends the message in response to the NAK received from the receiving node 12 which sends the NAK)

Referring to claim 25, Johnson teaches: a device for distributing content in a content distribution network (Sending node 12) comprising:

A memory (20 per Fig 2)

A storage device further to store a multicast period and a threshold number of multicast passes the storage device further to store content to be distributed in the content distribution network (Memory 20 per Fig 2 is capable of storing the round trip time or interval and resending the multicast message)

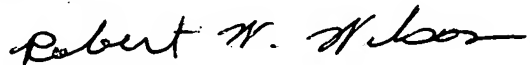
A controller (16 per Fig 2) in communication with the memory (20 per Fig 2) and storage device (20 per Fig 2) the controller configured to send multicast message to include a plurality of content engine receives the message to include a portion of the content (plurality of content engine receivers) the multicast message has inherent content per col. 6 lines 9 to 51 and per col. 5 line 63 to col. 6 line 7) the controller further configured to wait the multicast period for a negative acknowledgment message form at least one of the plurality of content engine receiver (Sending node 12 has a timer which measure time from sending a multicast message until time duration of the roundtrip time to a receive a NAK per col.6 line 9 -51 and col. 6 line 52 to col. 7 line 22) the controller further configured to resend the multicast message the threshold number of multicast number of multicast if a negative acknowledgment message is received before expiration of the multicast period ( sending node 12 receives a NAK within a predetermined period time (roundtrip interval) and resends the message that was multicast to the node at least one time which sent the NAK per col.6 line 9 -51 and col. 6 line 52 to col. 7 line 22)

*Conclusion*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571/272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Robert W Wilson  
Examiner  
Art Unit 2616

RWW  
7/25/07